

162. Under these circumstances, it was found that a pale brown spot of iodine was slowly formed under the decomposing platina point, thus indicating that ice could conduct a little of the electricity evolved by a voltaic battery charged up to the degree of intensity indicated by the electrometer. But it is quite evident that notwithstanding the enormous quantity of electricity which the battery could furnish, it was, under present circumstances, a very inferior instrument to the ordinary machine; for the latter could send as much through the ice as it could carry, being of a far higher intensity, *i.e.* able to open the electrometer leaves half an inch or more (155, 156).

163. The decomposing wire and solution of iodide of potassium were then removed, and replaced by a very delicate galvanometer; it was so nearly astatic, that it vibrated to and fro in about sixty-three beats of a watch giving one hundred and fifty beats in a minute. The same feebleness of current as before was still indicated; the galvanometer needle was deflected, but it required to break and make contact three or four times (33) before the effect was decided.

164. The galvanometer being removed, two platina plates were connected with the extremities of the wires, and the tongue placed between them, so that the whole charge of the battery, so far as the ice would let it pass, was free to go through the tongue. Whilst standing on the stone floor, there was shock, etc., but when insulated, I could feel no sensation. I think a frog would have been scarcely, if at all, affected.

165. The ice was now removed, and experiments made with other solid bodies, for which purpose they were placed under the end of the decomposing wire instead of the solution of iodide of potassium (161). For instance, a piece of dry iodide of potassium was placed on the spatula connected with the negative pole of the battery, and the point of the decomposing wire placed upon it, whilst the positive end of the battery communicated with the latter. A brown spot of iodine very slowly appeared, indicating the passage of a little electricity, and agreeing in that respect with the results obtained by the use of the electrical machine (157). When the galvanometer was introduced into the circuit at the same time with the

iodide, it was with
difficulty that the action of the current on it could
be rendered
sensible.
166. A piece of common salt previously fused and
solidified
being introduced into the circuit was sufficient
almost entirely
to destroy the action on the galvanometer.
Fused and cooled